Strategies

Teacher Professional Development in Chicago School Reform

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This is a second report (the first was entitled "Restructuring") for our program evaluation efforts for the 1994-95 school year at the Chicago Teachers Academy for Mathematics and Science. The work was organized by Robert Stake at the Center for Instructional Research and Curriculum Evaluation (CIRCE) at the University of Illinois. Assisting in this effort in addition to the authors shown on the cover were: Carmilva Flôres, Edith Cisneros, Marilyn Murphy of the University of Illinois and Eleanor Chelimsky, formerly of the U. S. General Accounting Office. Providing generous counsel to our deliberations on professional development were Olivia Watkins and Bill Rice of the Chicago Public Schools, Mark Smylie, Michael and Susan Klonsky, Robert Rich, Betty Merchant, Renee Clift, Mark Gierl and Paul Thurston of the University of Illinois, Dick Elsholz of the Michigan schools, Linda Mabry of Indiana University, Tony Bryk of the University of Chicago, Judith Warren Little of the University of California, Michael Huberman of Harvard, Michael Eraut of the University of Sussex and many staff members of the U. S. General Accounting Office.

Under contract between the University's Board of Trustees and the Teachers Academy, during the period September 1 to August 30, the CIRCE team conducted observations of Academy operations and studied documents to reach an understanding of key issues and indications of quality work. Earlier, the Director and Academy Board had emphasized their concern about knowing the impact of its program on schools, teachers and children. Other evaluation specialists had been hired to do a more conventional study of achievement gains; we stuck largely to our qualitiative and responsive methods of evaluation based on issues and interpretation. Out views of quality are included within the discussion of strategies of professional development contained in this report.

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Strategies

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systemic initiative (Fullan, 1995). It is especially in this arena, with the multitude of often competing, and subtly conflicting programs, where pathways through reform can be completely obscured.

Coherence and accessibility are so greatly needed. Teachers and schools need access to the wealth of information pertinent to informed decision-making. District leadership is needed to coordinate the activities taking place and provide a data base of information to schools about existing programs, missions, and costs. Districts could facilitate networks specifically designed to enable discussion about different programs and approaches. There are undoubtedly a number of ways that coherence could be increased in this arena; what must happen first is dialogue at all levels. Service providers, institutions of higher education and district personnel have expertise at initiating dialogue. But, according to the dominant philosophy outlined in the literature, all need to come together to discuss ways to decrease fragmentation and confusion and increase schools' access to information for the purposes of informed decision-making.

Conclusion

For reform in the century's closing years, macro-approaches to professional development and reform need to be upgraded. Support for reform, especially teacher-based reform, is inadequate. Teachers need coherent support from multiple levels across all systems of education. They need school environments that nourish and protect critical reflection and collaboration, that give all professionals a voice in the decisions that so directly effect their work. All need a coherent policy from the district and state levels, a policy that supports the efforts being made at site-level. Teachers need access to high-quality information about resources available to schools and teachers undertaking change. All of these factors will combine to provide teachers and schools with a belief that the changes they are undertaking in their practice are supported at all levels in the system and will not be "thrown out the window" with the next policy decree sent down from on high.

Chapter 3

Creating the future of teaching and learning of science and mathematics: the collaborative effort between the Teachers Academy for Mathematics and Science and CPS District 10

Elvira Souza Lima

The Academy's professional development and its collaborative efforts with CPS District 10 had as their objective the promotion of learning through pedagogical change. At the bottom line, this was going to happen or not within the milieu of the classroom. Therefore, the basic referential category for the analysis presented is the possible meaning that actions undertaken could have for the learning processes taking place in the classroom considered as part of the larger context of the school and the community.

The basic reference is thus that of the classroom as a community of learners, constructed through multiple interactional processes between teacher and students. The specificity of personal interactions within a classroom is mediated by formal knowledge, since it is the objective of the institution to promote the construction or appropriation of formal knowledge (formal, that is, organized in a system). Recently, in many educational movements around the world, the development of attitudes toward formal knowledge has been considered also as the objective of formal schooling.

Methodologically, it is important to be aware that the discourse presented by various people involved was not exempt of bias created by knowledge of CIRCE's model of evaluation, since at least some were already acquainted with the Year I evaluation process and subsequent annual report, *The Burden*. With the Academy seen as a genuinely helpful institution, outsiders involved with it were very careful in their choice of words to talk about the Academy's work. It tells us about the importance and impact of the Academy in the public school scene. It tells us also that meaning needs to be sought in other spheres of human action besides oral language.

Looking at some of the activities proposed by the Academy during this Spring semester of 1995, one may observe the use of diverse methodologies and the emergence of different concepts about the learning process. I will discuss two forms of collaborative work which I consider to be promising forms of activity for they incorporate the multiplicity of ways one can approach the teaching/learning of science and mathematics. Those forms are the Technology Program (which shows a rather realistic view of the learning adult) and "Creating the Future: Forging New Ways," (a conference organized by the Academy and open to interested members of the public to address issues related to science and mathematics learning through diversification of language). New possibilities to improve Academy actions within schools may be found upon analysis of both programs. And this constitutes the first part of the report. The second presents some aspects of Academy joint action with District 10.

The Technology Effort and "Creating the Future" Conference

The Academy team worked in an orchestrated way when engaged in a public event. One member was able to pick up the discourse where another one left off, one stood up when another sat down, one completed the sentence when the one speaking seemingly ran out of words or failed to find the exact term to express the idea. There were smiles of approval, heads nodding when they listened to one another. Academy people were ready to collaborate so that things would run smoothly.

In such situations one could observe that the staff as a group has knowledge about constructing an integrated team effort, a knowledge that is valuable and necessary to develop a sustained action within schools to achieve a key goal of the Academy, that is the empowerment of teachers. This knowledge became evident especially through the actions involved in the technology effort and in the *Creating the Future: Forging New Ways* Conference.

The Technology Effort. The Academy's 1995 effort at upgrading computer technology within schools seems an appropriate situation to assess the possibilities of the Academy's methodological approach to team development and collaborative work. It was a new subject matter for many teachers and a fairly new form of activity

to the community involved. Both Academy staff and school community were involved in a process that had many aspects.

An interesting example was the technology development effort with the Harold Wilson Elementary school. Academy assistance at this school was described in CIRCE's report *Restructuring* by Ami Soumare and Linda Mabry. We observed a growing collective effort to develop some kind of local technology development model. The pace of the process might have appeared slow to outsiders or even to insiders, however as the parties concerned sat around the table to discuss matters, one noticed that between outlining the steps to be taken and discussions about procedures, there was an effort to build knowledge on technological issues by the participant members of the school team through dialogue with the Academy staff.

Staff members from the Academy were careful listeners. They were tactful and did not impose (verbally) on teachers. They waited for people to make their observations and usually gave them enough space to ask questions. The teachers lacked a basic knowledge of technology (beginning with the vocabulary) that would allow them to establish a dialogue on the subject. Technology literacy was still to be developed. Therefore a distance remained between the discourse of Academy specialists on technology and their audience.

The approach of the technology team followed a good pace, allowing people to construct their knowledge in the field. A major aspect of their teaching methodology regarding the school team was to build knowledge step by step. School teams interacted intensively to solve the problems posed by use of computers, including checking out the wiring necessary in the building. Staff members served as facilitators and resource people to whom the teams or individuals could go when facing problems or questions.

It was clear that the school people were not literate in technology. The Academy staff seemed aware that knowledge had to be build upon conjoint action and acted accordingly, providing a supportive environment so that people could learn comfortably.

In other situations we observed the same attitude. For example, at a School Improvement Plan meeting staff members of the technology team made a real effort to be supportive, both by trying in their discourse to de-mystify the use of computers by

announcing the steps to be taken and insisting on the point that "this is a process, you'll get used to it."

Simultaneously with giving instructions on how to proceed, step by step, they asked questions to assure that instructions and procedures were understood. One-to-one dialogues interwoven with group discussion helped to clarify the use of computers and software for a given, particular objective.

Observing the various interactional processes developed during technology related meetings, one could see a great deal of concern on the part of Academy specialists to create knowledge opportunities and to allow time for people to develop their knowledge of technology at an individual pace. The necessity to develop learning through cooperative action may appear more evident in a new subject than in other subject areas such as science and mathematics. Therefore, a careful observation and analysis of adult learning process in this specific Academy activity on technology upgrading in school settings may inform other Academy activities on methodology for staff development strategies.

The Conference. An excellent example of the possibilities of future work of the entire Academy staff in their effort to promote changes within schools was the Creating the Future Conference. Here, we saw dimensions of teamwork already in place within the Academy. It suggested that many of the interactions among individuals were articulated suitably to support collective action of the Academy within schools.

The Academy adopted a twofold approach to teaching and learning of science and mathematics in this seminar. Participants were object of the Academy program as learners, since the Conference provided situations in which the objective could be identified as developing in the participants new perspectives to see/relate/act in the domain of those disciplines. Participants were also seen as teachers evident in the many pedagogical situations provided in which the subject was teaching science and mathematics in schools. Participants were invited to listen to and/or interact with pedagogical experiences developed by a number of teachers and school districts officials.

Science and mathematics education were approached from a multi-angled perspective. The different activities presented to the participants covered a range of diverse languages for thinking and talking about science and mathematics. The content and the pedagogy employed in different sessions were a comprehensive offering to teachers, ideas about a variety of ways they could organize their own pedagogical action to implement innovations in the classroom.

Participants were able to establish dialogues with people directly (teachers, curriculum developers) and indirectly (parents, librarian, mathematics and/or science consultants, school district officials, staff development agents, publishers), all involved with the teaching/learning of mathematics and science. Some of them envisioned mathematics and science as across the curriculum, while others reconceptualized mathematics and science within their curriculum area. Some presented approaches to connecting mathematics and science to one specific curriculum area (literacy, social studies, literature). The dynamics of the seminar provided time and space for formal and informal encounters, with a great amount of available material, hands-on presentations, and samples of teachers' and students' work.

The interactional space outside the Seminar's main events (such as the luncheon talks, main guest speakers) was large, allowing people to look for their interests and exchange ideas and impressions with each other.

Through these formal (organized) and informal channels, participants were able to gather information and ideas. In the opinion of many teachers, they got a better understanding of the Academy's goals and also of the meaning of some "lectures" they had had before in the workshops. One said,

> The Academy staff demonstrated throughout this seminar its extensive knowledge of organization and operation of collective action.

The audience reacted to this teamwork positively: "They really know how to put on a good show," said a teacher at lunch. "The good thing about the District and TAMS is that we have a chance to participate," commented a parent involved in mathematics

activities for parents. Teachers participating in the Academy program reacted to the Conference: "I had no idea they (Academy staff members) were so many;" "I didn't really know what they did except for the math improvement;" "I wish it (the conference) had happened before I started with TAMS ... because now I understand what their ideas are."

This methodology could be a source of reflection on the structure of everyday work of staff members within schools in order to optimize their actions to develop knowledge and autonomy of teachers. Though the work of putting on a conference is not the same as forming and maintaining teams at schools, they both involve common skills, many of which were observed in the Academy staff-orchestrated action.

Lots and Lots of Pippindotz

There is this magic dot that only functions within its group, but it gets lost (or maybe went out for a walk) and someone has to find it: he needs to go back to his group ...

This is language of fantasy, imagination at its best, and humor, all mingled in a narrative, nicely illustrated in the book *Lots and lots of Pippindotz*. This book was distributed to all participants of Creating the Future. It is a different form of discourse to talk about "hard science." In such a poetic language, complex scientific facts may not only become more accessible (at least in an introductory form) but, also, imagination, a key, higher psychological function to scientific knowledge development, may be provoked in an amusing manner.

Searching the bag given all participants at the Creating the Future Conference, one found, besides *Lots and lots of Pippindotz*, another two books, a technical language discourse on "Local leadership for science education reform," and "Captain Bill Pinkney's Journey."

This last was an adventure story of a self made man, an African-American who defeated the odds to launch himself into a journey around the world, alone in his boat. It was a journey shared with many people back home through some technical apparatus that

allowed people "to travel" from within the classroom and solve problems posed thousands of miles away by a 'round the world, one-man travel-show.

Captain Bill was present at the conference. He explained how everyday problems posed to him by the vicissitudes of traveling alone in a boat around the globe became shared concerns to groups of students from Chicago public schools who were monitoring his trip and participating in his experiences through videotapes and computer communication. "The world today is all connected ... Children in a school in Chicago ... are able to learn of a problem I had to solve on the other side of the world ... just as it happens ... and find answers. [It] is one of the wonders of communication and technology today!"

Captain Bill made real to the audience something that had been raised at several points in the conference: that we can think about teaching/learning science in a meaningful way, based upon experiences of everyday life and real problems that are raised by concrete situations. The ones presented by Captain Bill were unusual for urban kids. The unusual factors combined to present urban children a new concept of time and space as they "followed" the Captain. A lesson in itself was the fact that the problems he had to solve and the ones he presented to the kids depended upon organized action and reflective thought. Scientific methodology as a required form of human activity is not stressed in school culture for the sake of science. It is, in fact, an organized form of human behavior upon which one depends to solve all kinds of situations in everyday life outside school.

The meaning of science as a domain of human knowledge was the underlying theme in the Conference's talk and discussion. Science becomes something attainable, useful, surpassing the limits of the classroom to find its true meaning in life out there, in the world.

Academy Efforts and Joint Action with District 10

The collaborative efforts between the Academy and District 10 may be approached from two main perspectives: that of the actual interaction between the two institutions and that emerging from the

Academy's principles. The basic theme evoked by members of both institutions is *change*. From the analysis of their actions we can identify at least two other important themes: that of information and flux of information and that of the learning adult.

The relationship of the Academy with District 10 was primarily of one agency rendering service to another. The Academy was not the only agency to offer and actually provide professional development services. Any one D10 school engaged other programs simultaneously, sometimes even in the same content area. For teachers and for the school as a community of practice, this seemed to some a burden. Such was revealed in CIRCE's evaluation (Stake et al., *The Burden*) a year ago. The burden comes not only in time that teachers and administrators have to give to outsiders but also as the difficult task of integrating different programs and different educational philosophies into a single practice within the classroom. For the community of the classroom, those outside interventions need to be translated into one general practice, not a series of juxtaposed practices.

Several schools within District 10 were participating in the Chicago Systemic Initiative (CSI), a program sponsored by the National Science Foundation. To look into the combination of CSI and Academy's work within D 10, one needed to take into account these perspectives: the meaning of these initiatives for everyday life within classrooms, considering the individuals directly involved, primarily teachers and students but also administrators, staff members and families, the remaining members of the school community. According to these individuals, the change process was perceived and experienced as one single process, even though constituted by different programs and initiatives.

Participation in CSI acknowledged need for change. Inclusion as a CSI school in D 10 clearly obeyed the basic principle of "being ready for change." As Blondean Davis, Subdistrict Superintendent stated, "We picked the most *vibrant schools*, the ones that were ready to take on [this endeavor], "the energetic [schools]." Having a principal supporting CSI constituted an important factor for a school to be classified as "ready to change." Individual teachers from such schools might already have been involved in different programs, willing to go through evaluative reflection about their

teaching and willing to try different approaches to teaching/learning. But this was not necessarily a common trait within each individual school.

There was little indication that the decision to participate in these "change" initiatives are widely discussed in the schools. Teachers not participating in a given program in their school showed little knowledge about the program. Some teachers who participated in the decision to include the Academy in their school improvement efforts were economical in their comments about the Academy ("It is for math and science teaching;" "They take teachers out of the school;" "There is this thing of the subs!"). However, it was interesting to find that the presence of the Academy in a school often affected teachers' work. Teachers not directly involved showed enthusiasm about the Academy's work from listening or observing participant teachers.

The fact that the Academy "takes teachers out of school" seemed to be an outstanding fact to non-participating teachers. According to D10 officials, it accounted for the interest that many teachers initially expressed for the program. Personal reports of teachers not enrolled in Academy workshops mentioned that the fact that colleagues were leaving the building called their attention to the program. "What are they doing out there?" They probably voted for the program but they did not seem aware of what it meant to vote for it.

However, those schools are the ones that have a predisposition for change and have on-going processes of change that make them stand out against the majority of Chicago schools, certainly among those of District 10. This means that teachers working there are not alienated, uninformed or indifferent to efforts to modify school environments. Thus, both the Academy's and D10's CSI initiatives were carried on within contexts that favored them. One question we raised was "Are actions taken inclusive enough to bring the entire community to participate in their program for change?"

To reflect on the process, I broke the argument into two blocks: one to discuss relations between D10 and the Academy, the other to discuss their joint action in the light of school dynamics.

Seeds of Collaborative Action. Both Academy and District 10 officials were positive when talking about each other. Officials from District 10 saw the Academy as a very receptive institution for collaboration in their efforts, even when they were not directly relating to the Academy's curricular objectives. They praised the Academy enormously for the support it gave District 10 initiatives. They accorded the Academy most of the credit for Chicago Systemic Initiative "success" in District 10. The Academy was instrumental in various initiatives within District 10 such as providing support to extend an efficacy workshop effort to parents. District 10 Official Yvonne Hannett referred to the "kindness of TAMS" ("They are kind enough to provide us with ..."). Superintendent Davis acknowledged publicly that the Academy had been a major resource for the development of CSI there. To Davis, the Academy had a meaning far beyond being nice: "Joe [Fratarolli, Academy Chief Operating Officer] makes impossible dreams come true ... one puts one's ideas on a piece of paper and sends it to Joe. He will manage to make it happen."

District 10 was considered both by its staff and by some staff members from other districts as the district with the best results in the Chicago Systemic Initiative. Some districts reported themselves quite at a loss with the CSI while they saw District 10 as very focused, more targeted to achieve CSI goals. District 10 officials recognized that the Academy's collaboration had been a major factor in D10 response to CSI.

District 10 relied on the Academy for curriculum development in science and mathematics and for specific teaching activities with the given content. Support for changing more complex behaviors in school was expected to come from other sources, one of them being the Efficacy Institute. Although it is normal for teachers to work with different sources of knowledge for teaching, when it comes to a complex form of human action, such as changing ways of performing professional roles, there is a need for coherence. Some individual teachers reported being confused by the action of different agencies with different agendas and distinct methodologies to implement change. As I saw it, new proposals needed to make sense of the teachers' previous experience. In order to comprehend, for example, the development of mathematical thinking of students as presented by the Academy, teachers themselves may need to develop

a new understanding of mathemathics (as compared to the understanding they developed as students). So it is a matter not only of developing knowledge of mathematics to teach as proposed by the Academy but, also, to de-construct the previous representation teachers may have of mathematics. And maybe, to de-construct the learn-the-procedure approach to mathematical problems they brought from their former schooling experiences. The supporting activities that deal more directly with changing behavior needed to be integrated into this content framework, giving support to reflective thinking.

The basic lines of the Academy's philosophy allowed the conjoint development of innovative pedagogical actions necessary to achieve the objectives of CSI. The Academy staff demonstrated a good approach to cooperative team action in a variety of situations (SIP meetings, Creating the Future, evaluation profile). Thus there was ground for effective collaboration between the Academy and CSI schools, with the objective of supporting a community of change within each school.

Articulation between the Academy and District 10. Academic year 1994-95 was the first year of a systemic collaboration between the Academy and nine District 10 schools. The Academy's approach to staff development was coherent with District 10's objectives for school improvement. "Participation of the Academy in the process was crucial,:" said Blondean Davis. Yet there was evidence that they had but partial knowledge of the diversity of each other's activities.

As they initiated this collaboration, the basic lines of cooperation were just being defined. We observed that the flow of information between the two agencies was partial and informal, a fact not particularly unusual in the beginning of a process of collaboration. By its informality, it happened sometimes that important information were given to individuals who did not make it available to other team members. District 10 failed to make available to the Academy some important pieces of information, for example, about the development of an informal network of exchange including teachers not participating in the Academy program.

One of the reasons why the Academy attracted the attention of people across the educational system is that many teachers, individually speaking, felt that the Academy supported their work and gave credit to their pedagogical knowledge. In their words, [The Academy] "don't act as if we knew nothing;" "They tell us what to do in a different manner;" [It is] "the less up-to-down program" [one can find]. To put theory into practice within the classroom, teachers faced a lot of problems: "I enjoyed the workshop, but the moment I started using it in the classroom, I got confused;" "I don't know how to handle the children in this kind of situation (a situation proposed by Academy) and I don't know exactly where to look for help;" "I thought it would be easier but there are things that I don't know ... However, I didn't have these kind of questions in the workshops." Some former Academy trainees, enthusiastic about the program and the Academy proposal, gradually drifted away from the program for lack of a support team within the school—according to their oral reports. This suggests that once implimentation specialists were not in the school anymore, some teachers felt unable to carry out the pedagogical action that they were co-constructing with the Academy. Their approach to mathematics and science teaching appeared to be returning to former models.

Knowledge about this Academy-District 10 partnership was not widespread. As revealed by personal accounts of some participating and non-participating teachers and community members. some perceived the two as antagonists or competitors. Such inaccurate ideas may have prevented some people from taking benefit from the partnership.

An interesting fact observed was the development of an informal network of knowledge-sharing of knowledge acquired at the Academy.

> "I kind of saw what the other teacher was doing with the [Academy] material and began ... adapting it."
>
> "This teacher was leaving her classroom to go outside to some training in math and I went to see what she was doing because this is something I need to know more about."
>
> "I thought this was (District 10) new stuff, but she (the teacher) told me it was TAMS work ... I don't know exactly what TAMS stands for but ,for sure, there were some good ideas to work in the classroom."
>
> "I knew she was doing something new. She liked them [the Academy] because the activities are good. I used some in my classroom but now I don't know how to go on. I wish I could join this too, then, maybe ..."

This suggests that, by its good quality, the work of the Academy is reaching beyond their immediate participants. At the moment, there is no planned strategy within schools to allow interested teachers to develop a systematic exchange of practices and ideas, one of the important components of any school reform.

Processes of change. The leitmotif across most actions, discourse, and interactions was "to promote change.". Underlying most action taken both by the Academy and District 10 was the intention to promote change in pedagogical action.

Although concentrating on subject matter (mathematics and science), a main purpose of some collaborative action undertaken was to facilitate change in pedagogical action and change in the image teachers have of their own job. To think about the school as a community is a goal revealed through improvement plans and collective action involving parents, staff and teachers. Concrete actions were nonetheless generally targeted to individual teachers in each school, not to the community of the school. Much of the discourse was directed to develop individual teacher's attitudes. And although collective work was mentioned, there was very little special attention given to interactional processes, dynamics, and interpersonal relations. The same happened regarding the development of teams within schools. An underlying assumption seems to exist that with little effort, one could directly transform words into collective action.

An important component of the collective work at schools was the substitutes. For teachers working with the Academy, it was seen as problematic that they are not merely replacements. Classrooms are communities that forge themselves through the everyday shared experiences of its members. Inside rules are created, unspoken scripts are developed through the interaction of students

and teacher: those constitute the basic social tissue in which the teaching/learning action occurs. When a substitute walks in, she/he does not have the knowledge of this culture in this classroom. Even when she/he has all the planning in her hands, she/he does not have at her/his disposal this basic knowledge of classroom interaction. From the perspective of students, this may be a major disrupting factor, as it is for the teachers when they return to their classrooms. The Academy has long listened to the complaints about leaving the classroom and is aware that substitution is still envisioned as a replacement of an adult to carry on the teaching. From the perspective of the classroom culture and community, given the dynamics of everyday life within the classroom, the implications of having substitutes go far beyond the surface problems usually raised.

The Learning Adult.. At a School Improvement Plan institute, a member of the Academy staff is talking about evaluation. *"I am sorry to say, but very few schools have an idea of what an outcome is...outcome has to be something that can be assessed"*.

Sitting around the tables, each school's representatives prepare an "assessment plan." Whitmore School, from District 10, was expected to be there, but did not come and did not send word. Some Academy members show surprise: "Maybe they think they don't need this anymore;" "They mentioned they were coming. I don't know what happened." There is disappointment in the air: why isn't Whitmore present at the workshop? "Well, they have been in the focus at D 10 and maybe they think they know it all ..."

"Choose a subject area, one grade, and sketch out some outcomes", the coordinator goes on. The way the workshop is organized suggests that people outside have a very limited knowledge of what assessment is. The leader conducts a series of questions and remarks in a highly structured guided activity to develop the concept of assessment.

At each table is an Academy staff member. They are all attentive, listening and voicing opinions. The coordinator insists that by outlining the outcomes of the process of assessment is a means of empowerment for students. It is unclear how empowerment is going to be achieved without actual redistribution of power in the concrete situation of the workshop in itself. Empowerment is important. But

what does a process of empowerment imply in the functioning of an institute such as this one?

On the other side of the room, the technology team works with the technology staff from each school. One member says, "When it comes to technology, one has to get used to using technology." Another picks up the subject and talks about the time necessary to learn technology. "It is not over night. It is not like other subjects we are familiar with."

It is waltz on one side of the room, reggae on the other. Waltz seems to engage people in the task, questions and comments are on target, getting at the core of assessment of subject matter. On the other side, many wonder what is going on with these "computer people." While only some on the technological side are quite involved in the learning situation, many in the "assessment" are completing the task. We are witnessing two distinct concepts of *the learning adult* side-by-side.

Clearly the discourse of the Academy staff changes when the subject is Technology, as seen in this and other situations. It follows another conception of the use of discourse. The pace is completely different. People speak pausedly, words are fully pronounced and there is quite a number of "thinking pauses," that is, time allocated for people to think, digest, and incorporate what is being said. There is a subtle, underlying acknowledgment that people will move slowly in acquiring computer concepts and technological tools.

The Academy's technology effort shows sensitivity to adults in the process of learning. Elsewhere, both the Academy and District 10 actions and discourse revealed that the needs of the adult engaged in learning processes were not a great concern. Teachers were expected to make the bridge between what is taught in the workshops and classroom actions. However, to transform discourse into practical action is not something evident, nor is it immediate. To assume that people will create meaning out of oral discourse and transform practice is one common misunderstanding of staff development practices across cultures and countries. Though many specialists acknowledge this misunderstanding, they perpetuate it. One reason may be the overlooking of specificities of the adult learning processes.

Change in professional performance evolves from critical reflection of professional action, including intention, performance, goals and results achieved. To expect that personal experiences of change will necessarily change one's professional behavior is unrealistic. Reflection on one's action in the classroom with a specific subject matter is a proper way of promoting change because it allows one to understand where, how, and why the change is occurring.

Information Issues. *"Teachers don't know what they are getting into."* It is clear to many involved in the Academy's District 10 initiative that the objectives of its actions are not clearly perceived by teachers. Academy's staff members, school personnel, officials, everyone acknowledged that "teachers don't know what they are getting into" when they vote for joining the Academy's program in their school. As indicated before, teachers themselves made this comment in various ways. It is important to remember that District 10 schools had been chosen for their "readiness" to change, which made them different from the average school. Yet there was not much understanding that the Academy was going to emphasize a process of pedagogical change in the school, one intended to reflect in everyday life in the classroom.

To establish a working agreement with a school, the Academy relied on votes as a sign of acceptance. This is problematic because it comes from internal school dynamics producing account positive gestures without necessarily revealing the inner disposition of teachers. A positive vote may not reflect the basic interest of teachers. A process such as the one the Academy proposes to individual teachers is better understood. There teachers had the chance of constructing for themselves an understanding of the Academy's proposal and methods as they related to their teaching style. Participation would be better if they understood the implications of engaging in the Academy's advocated pedagogy, implications to their professional performance and to their classroom organization .

There is little organized action to promote dialogue with teachers about what will be forthcoming with the Academy package. Written material did not fulfill this purpose because it was seldom read. Lectures are problematic. In fact, lectures have limited possibilities in any staff development function as the international

literature has pointed out in recent decades. Instead, comprehension seems to be built upon the dialectics of action and reflection, in which support for thinking comes from agencies such as the Academy.

In many of the District 10 schools working with the Academy it seemed that people involved were only beginning to figure out what would come after they joined the program. Time and energy were beginning to be used for learning and development of pedagogical action. Teachers were actually trying to situate themselves in the program. Some teachers got discouraged while others were able to develop in their own classrooms the learning situations that Academy people proposed. Still others went through diverse processes in which they either adapted activities to fit their teaching philosophies or they modified some of their pedagogical practices but not substantially.

Dissemination throughout the school. Dissemination was expected, but not specifically supported. International research supports the view that socialization of knowledge within the institution depends on support mechanisms that are created along with staff development, and that the efficiency of initiatives taken is related in the degree to which the knowledge held by teachers and community members is taken as part of the process. The personal experience of change tends to fade away when there is not a supportive environment for change. Individual actions seldom are strong enough to provoke transformation in other teachers.

As mentioned before, the activities provided by Academy do appeal to teachers not involved in the program. Some try to benefit from what they learn informally from the teachers working with the Academy. They are little able to develop their interest because there are few mechanisms within the school to support them. Thus it seems there is a potential for collective growth and change process within schools still to be exploited by the Academy.

Another important aspect of flux of information is the socialization of information among Academy staff members themselves. They referred to earlier staff meetings held mostly to update the agenda. They "didn't go any further than oral reporting, kind of giving account to the directors of what was being done, just

giving a sense of where each one was at their individual schools and/or with individual teachers." Those casual meetings were discontinued. Though comfortable personal relations do open opportunity for exchange, as conducted, the exchanges were not comprehensive. Distinct departments within the Academy are not so articulate as would be necessary to improve the impact of their actions in school. Absence of real conjoint action between Mathematics and Science units became apparent. Weak interdependence of staff development specialists emerged as a problematic point. It legitimized a dichotomy between content and form and prevented learning at the level desired by the Academy.

However, when we looked into the Academy staff's cooperative action in other situations, we saw they had developed a fairly good sense of collective action and articulated performance. It allowed them to put into place the well orchestrated activities discussed earlier.

General Comments

How much change can occur with minimum long-term follow-up and without sustained collaborative action within the school itself? As observed, pedagogical goals were not constructed collaboratively with the teachers which meant it was very difficult to achieve the aspired empowerment of teachers through the Academy's District 10 actions. Almost alone, teachers were expected to bridge the gap between workshop activities and teaching in the classroom. To integrate the new information to their pedagogical knowledge, they needed more than expectations. The often-repeated goal to empower teachers, as voiced by many of the Academy's staff members, required additional forms of action.

Teachers are too often seen as a uniform group of professionals in which individualities are not relevant. But distinct background and teaching experience are important factors for the Academy's programs. Teachers with more appropriate pedagogical practices before getting into Academy programs were the ones particularly capable of taking advantage of the training. They reported themselves as becoming more "creative" within the classroom. Teachers that are perhaps most in need of Academy

collaboration were more likely to miss the meaning of the whole process. They were unable to deal by themselves with content and form, that is, to think of their classes as a dynamic unity of subject matter articulated with pedagogical action. Though there was effort from CSI to fill this gap, the actions taken did not cover the needs of teachers.

An important step to clarify this situation has been taken by the Academy evaluation department with the SOAP instrument. The information to be collected through this inquiry should be useful to shape forthcoming Academy's actions. Allocating time to listen to teachers voices through SOAP and other channels should increase problem-solving dialogues between the Academy and the schools.

The approach to learning pursued by the Academy implies changes in the way teachers envision learning and knowledge construction. Neither the Academy nor D10 had taken sufficient substantive long-term action to support the change process. There was acknowledgment of the need to address the issue of change through specific mechanisms such as the school improvement plan institute and the efficacy workshops.

As we reflect deeply on models of change created by sectors of the educational system other than the school itself (e.g., district, board, federal agencies, etc.) and by their participating agencies (universities, Academy, etc.), we see the approaches alien to the school community. We should raise questions such as "Can an outside model of change promote effective change that will last overtime and be appropriated (taken over) by the community? Or should the model of change be defined, or at least adjusted, to the conceptions of people involved in it? "Who sets the priorities in the change process? Who defines the agenda, the school or the agencies?" Are schools constructing the change process with collaborative efforts of external agencies or is it being imposed on them?"

The Academy's collaborative effort in District 10 to promote changes was one that raised in one way or another the interest of many people involved in schooling at the district level. It raised questions, opinions (not necessarily favorable, but always acknowledging the effort as a positive one), demands and resistance. All pointed to the fact that change is understood as necessary. To

provide space for discussing change in itself has been very effective from the teachers' points of view. Along with it comes reflection about the meaning of one's professional role, critical evaluation and reformulation of pedagogical action. Enrichment of one's own knowledge of subject matter means more flexibility in pedagogical action, thus the efforts taken by both institutions were addressing, though partially, some of the main forces in the change process.

Strategies for Professional Devopment Drawn from Evaluation Designs

Robert Stake

As indicated in Chapter 1, efforts to develop city-wide strategies for professional development have not resulted in a plan that deals effectively with teachers and schools with little interest in changing. The grand strategy of publicizing low test score performance to recognize, redirect, or embarrass low performing schools has been singularly unsuccessful. Small increases isn funding are caught up by change-inclined schools and large increases of funding are not anticipated. Pathways and TIME provided a comprehensive guide to improvement but the system has few mechanisms for getting schools to take those guides seriously. A grand strategy for the CPS as a whole has not emerged.

It occurred to us that it might be instructive to design an evaluation of CPS professional development and then to analyze that design to see if the characteristics and criteria targeted by professional evaluation would suggest opportunities for rethinking grand strategies. Evaluators rely on various organizing ideas such as goals, issues, needs, functions, hypotheses, and strategic analyses. Thus alternative points of view might emerge by approaching the problem from another vantage point.

We took advantage of the recent retirement of Eleanor Chelimsky as evaluation head of the U.S.Government Accounting Office to organize an exercise in evaluation design. She agreed to work with me and a group of University of Illinois graduate students during the spring of 1995 to design an evaluation of CPS professional development. The plan was to follow the manuals and examples of the GAO. The GAO is the Congressional agency that investigates various programs and activities created bys federal legislation, answering particular questions raised by Senators and Congresspersons.

We decided to form teams and develop three separate evaluation plans. Two were completed; illness kept the remaining